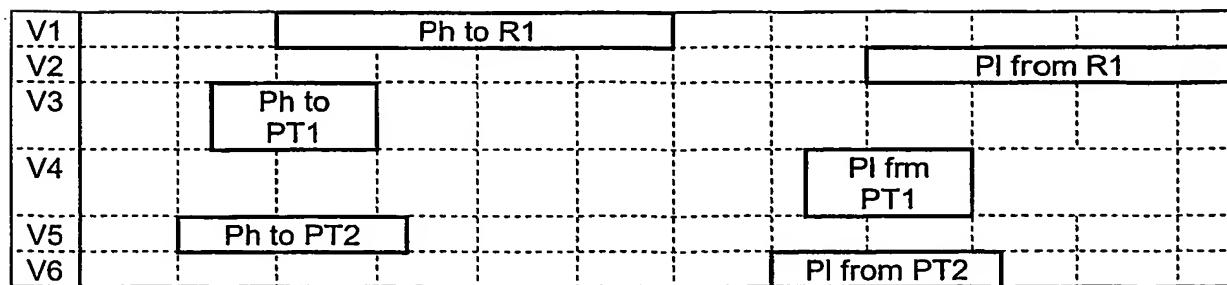


FIG. 1

FIG. 2 Valve timing chart for FIG. 1 pulse tube refrigerator



0° 30° 60° 90° 120° 150° 180° 210° 240° 270° 300° 330° 360°

